Before you start sampling, be sure to read the following pages to familiarize yourself with the equipment and the procedures that you will be using. *All of the procedures that you will follow in sampling your lake are done for specific reasons. It is very important that you follow the sampling procedures exactly as they are laid out in the following pages to ensure good, consistent, high quality data. The following pages will provide you with sufficient background on the design of the equipment and proper procedures to use.*

ON SHORE PROCEDURES

Before you begin analyzing your water samples and preparing them for the State Laboratory of Hygiene, here is a quick checklist to make sure that you have everything you will need.

- ☑ Manual
- ☑ Field Data Sheets
- ☑ State Laboratory of Hygiene slip for your phosphorus and chlorophyll samples
- ☑ Pencil and waterproof pen
- ☑ Safety gloves
- ☑ Safety goggles
- ☑ Phosphorus sample sticker
- ☑ Chlorophyll sample sticker
- ☑ "Acid added" stickers (optional)
- ☑ Three trays of ice cubes
- ☑ Styrofoam® mailer kit
- ☑ Ziploc® bags
- ☑ Packaging tape
- ☑ Merchandise return label and priority mail stickers
- ☑ Integrated water sampler
- ☑ Magnetic Filter Funnel (2 pieces)
- ☑ Chlorophyll tube
- ☑ Hand pump with plastic tubing
- ☑ 500 or 1000 ml plastic flask
- ☑ 250 or 500 ml graduated cylinder
- ☑ Membrane filters
- ☑ Test tubes
- ☑ Tweezers
- ☑ Paper towels
- ☑ Squeeze bottle filled with distilled water
- ☑ Acid vial
- ☑ Waxed paper
- ☑ Litmus paper and color chart
- ☑ Phosphorus sample
- ☑ Water sample in the 2-quart juice jug

ON SHORE PROCEDURES

Phosphorus Sample Preparation

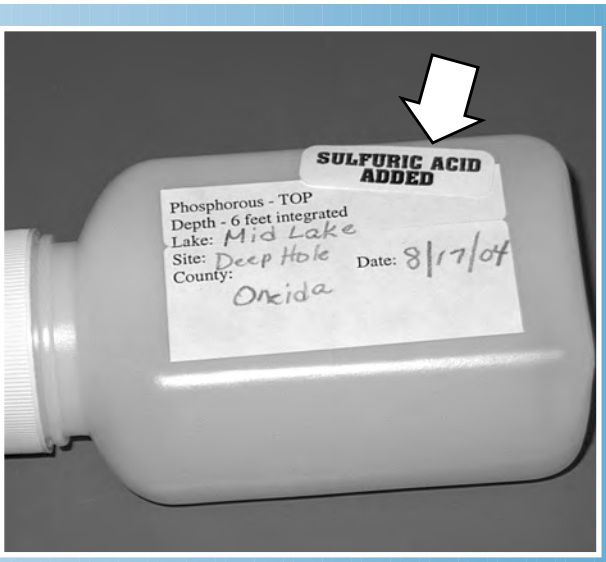
Be sure to put on your gloves and safety goggles before beginning your phosphorus sample preparation!

STEP 1. Take out your phosphorus sample.

STEP 2. Remove the sulfuric acid vial from your kit.

STEP 3. Uncap your phosphorus bottle and empty contents of one acid vial into your phosphorus sample. This will "fix" your sample by inhibiting bacterial growth and keeping the phosphorus from sticking to the sides of the bottle.

STEP 4. Replace lid on acid vial and the cap on your phosphorus sample. Mix your sample by inverting the bottle several times. As an option, you can place a sticker on the plastic phosphorus bottle, stating that acid has been added.



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ON SHORE PROCEDURES

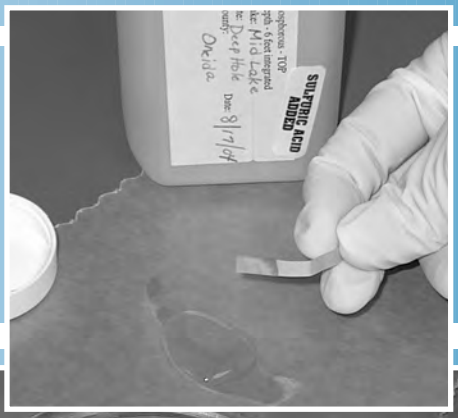
Phosphorus Sample Preparation (continued)

Because all water samples differ, it is important to check the acidity of your phosphorus sample. The amount of sulfuric acid you just added to "fix" your sample may not have been enough to acidify your sample.

To check the acidity of your phosphorus sample:

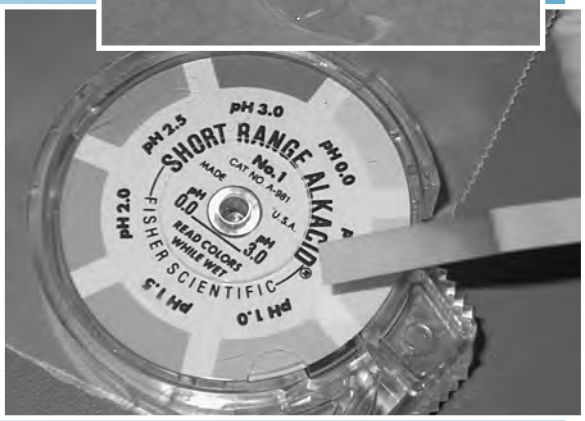
STEP 5. Open your sample bottle a second time. Take out a sheet of waxed paper. Pour several drops of your sample into the phosphorus bottle lid. Pour this small amount of your sample from the lid onto the piece of wax paper.

STEP 6. Tear off a two-inch piece of litmus paper and dip one end in the water sample on the wax paper. You should see the litmus paper change colors. Be careful with the litmus paper and the water drop on the wax paper. The color will stain!



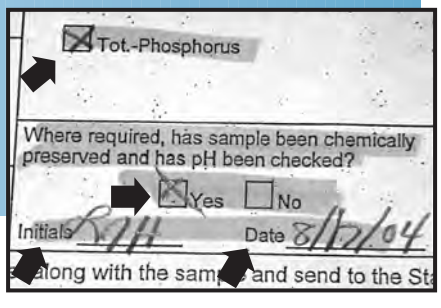
DNR PHOTOS

STEP 7. Compare the color change on the litmus paper to the color chart. If the color of the litmus paper matches the shade on the chart listed at 2.0 or less, your sample is ready to mail.



STEP 8. If the color of the litmus paper matches the shades on the chart listed at 2.5 or higher, add one more vial of sulfuric acid to your sample bottle. Replace cap and invert the bottle several times to mix the sample again. Repeat steps 5 to 7.

STEP 9. When you are done adding the sulfuric acid, rinse and dispose of the used vials in the garbage. Store unused vials out of the reach of children!



DON'T FORGET to fill in the following areas on your lab sheet: Check the "*Tot. Phosphorus*" box in the "*Nutrients Bottle 250 ml*" section. Check "*Yes*" in the box asking if the pH (acidity) has been checked. Add your initials and the date.

ON SHORE PROCEDURES

Chlorophyll Sample Preparation

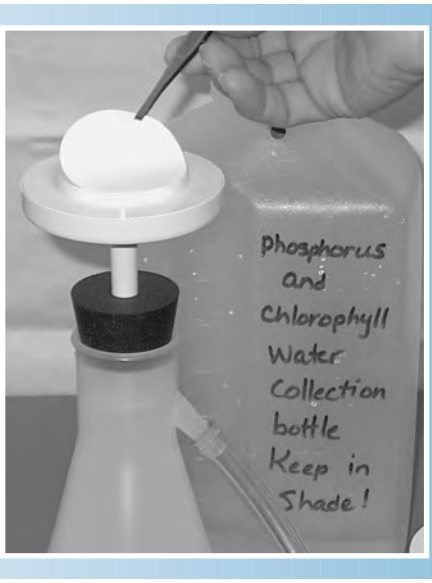
Since light can cause the algae to grow and alter your sample, this on shore procedure for preparing your chlorophyll sample should be conducted in the shade and out of direct sunlight.

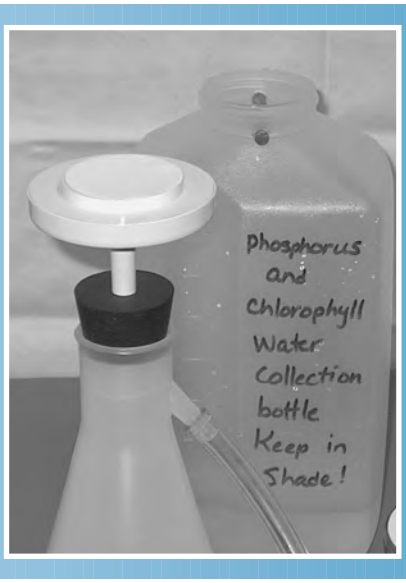
STEP 1. Place all the parts of your chlorophyll filtering equipment at your work area.

STEP 2. Attach the plastic tubing of the hand pump to the spout of the 500 or 1000 ml plastic flask.

STEP 3. Insert the bottom part of the filtering cup into the flask. You may want to moisten the stopper first to ensure a good seal.

STEP 4. Use the tweezers to pick up one membrane filter and place it on the center of the filter cup base (i.e. the black screen). Note that filters are white and the divider sheets are blue. Make sure you use a white filter and not a blue divider sheet!





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